

# A collection of Psocoptera from Australian chestnut trees in Natal, South Africa.

by

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This short paper is based on a small collection of Psocoptera made by Mr. E. C. G. Bedford and Mr. D. P. Annecke and sent to me for identification. The specimens were obtained from parasite rearing-boxes containing twigs of Australian chestnut (*Castanospermum australe*) infested with *Icerya seychellarum* (Westw.) collected at Pietermaritzburg, Natal. The identifications are required in connection with the suspected parasites of the Psocoptera which have also been collected from the boxes and which will be dealt with by Mr. Annecke in a separate publication. Apart from this interesting connection it is also of interest to note that all the specimens obtained represent new records for the species concerned and all increase our knowledge of their distribution considerably.

The following species are represented:

## Family LIPOSCELIDAE

**Liposcelis bostrychophilus** Badonnel. 14 ♀ ♀, May 1959 (D. P. Annecke).

This species was described from Mozambique (Badonnel, 1931) and has since been recorded from several parts of the world including Europe, North Africa and the Congo. Only females are known.

## Family CAECILIIDAE

**Caecilius congolensis** Badonnel. 47 ♂ ♂, 66 ♀ ♀, 26.i—8.ii.1959 (E. C. G. Bedford).

This species was known previously from the Congo and Angola. The present specimens agree well with the published descriptions and the measurements fall within the possible limits of variation suggested by the measurements given by Badonnel (1955). Table I gives the measurements for five specimens of each sex.

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TABLE I.

Measurements of five specimens of each sex of *Caccilius congolensis* Badonnel, from Pietermaritzburg, Natal. Wing length given in mm., all other measurements in  $\mu$ .

Wing Length	IO/D	PO	f <sub>1</sub>	f <sub>2</sub>	f <sub>1</sub> /f <sub>2</sub>	T	t <sub>1</sub>	t <sub>2</sub>	rt
♂ 2.6	0.36	0.86	550	400	1.37	1075	325	125	2.60
♂ 2.7	0.37	0.78	522	387	1.34	1000	322	100	3.20
♂ 2.8	0.47	0.88	575	450	1.27	1050	325	112	2.90
♂ 2.6	0.46	0.92	600	450	1.33	1050	325	112	2.90
♂ 2.6	0.46	0.92	550	425	1.29	1000	325	100	3.25
♀ 2.7	1.20	0.77	450	362	1.24	925	275	112	2.40
♀ 2.8	1.33	0.83	500	387	1.29	975	275	112	2.40
♀ 2.4	1.17	0.77	422	350	1.20	900	262	100	2.62
♀ 2.8	1.22	0.88	450	362	1.24	962	275	100	2.75
♀ 3.1	1.39	0.79	450	375	1.20	1025	250	100	2.50

**?Fülleborniella capensis** Enderlein. 1 ♀, 9.ii.1959 (E. C. G. Bedford).

The original description of *F. capensis* is very brief and includes at least one character (the length of the pterostigmal spur-vein) which is known to vary considerably in the genus; the genitalia were not described. The present specimen agrees well with the few characters given in the description but re-examination of the type is necessary before the species can be satisfactorily characterized; the present determination is given, therefore, with some reservation.

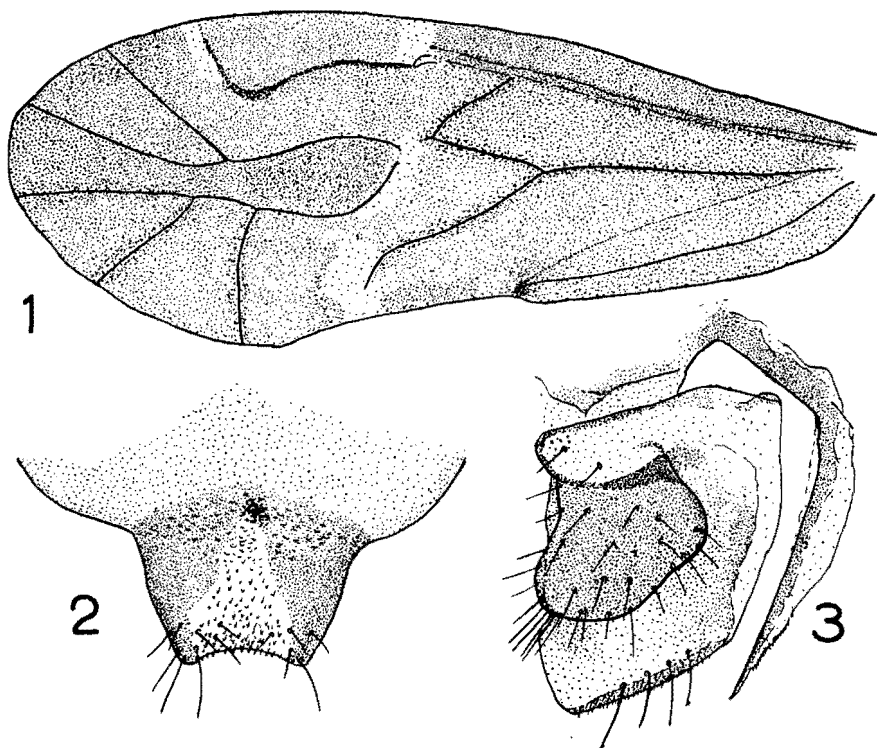
### Family PERIPSOCIDAE

#### **Peripsocus setosus** spec. nov.

**DESCRIPTION OF FEMALE.** *Coloration* in alcohol. A dull orange-brown species. Head orange-brown with some irregular darker spotting on the vertex adjacent to the epicranial suture and near the compound eyes. Frons pale. Postclypeus orange-brown with faint indications of slightly darker striping. Anteclypeus pale. Labrum brown. Epicranial suture brown. Antennae pale orange-brown. Eyes black. Ocellar tubercle dark brown. Maxillary palpi coloured as antennae, final segment with a slightly darker tinge. Thorax orange-brown, sutures and a longitudinal median band on the antedorsum paler than the rest of the antedorsum and lateral lobes. Legs pale orange-brown, tarsi of pro- and mesothoracic legs tinged with darker brown. Fore wings (fig. 1) with membrane more or less uniformly pale brown except for some almost hyaline spots and some slightly darker areas, as follows. Hyaline spots: 1. at base of pterostigma and at junction of R<sub>1</sub> and wing margin; 2. just basad of the separation of Rs and M, this spot extending along the

vein M and posterior to it until opposite the junction of  $Cu_1$  with the wing margin; 3. at junction of  $Cu_1$  and wing margin, this spot extending towards that adjacent to M, but not coalescing with it. Darker areas: 1. a very dark spot at the nodulus; 2. R and other main veins in the basal half of the wing and the branches of M faintly margined with a brown tinge a little darker than that of the membrane; 3. area between Rs and M a little darker than rest of membrane. Veins brown, except for  $Cu_2$ , which is pale, and the veins in the hyaline areas mentioned above, which are pale or evanescent. Hind wings with membrane a little paler than that of the fore wings, uniformly tinted. Veins brown. Abdomen pale, terminal structures pale brown.

**Morphology.** Length of body 2.1 mm. Epicranial suture fine and distinct, anterior arms not as distinct as median part. Head with fine, short, pubescence. Antennae with fine flagella, flagellar segments much narrower than scape and pedicel;  $f_1 = .225$  mm.;  $f_2 = .175$  mm.;  $f_1/f_2 = 1.28$ . Eyes small.  $IO/D = 3.3$ ;  $PO = 0.66$ . Ocelli conspicuous. Measurements of metathoracic leg:  $T = .750$  mm.;  $t_1 = .187$  mm.;  $t_2 = .112$  mm.;  $t_1/t_2 = 1.67$ . Length



Figs. 1-3. *Peripsocus setosus* spec. nov., 1. Fore wing; 2. Apical lobe of subgenital plate; 3. Gonapophyses.

of fore wing, 2.25 mm. Pterostigma with distinct but rounded apex. Rs and M fused for a short length, the distal half of the fused section evanescent.  $M_1$  and  $R_{4+5}$  approaching each other closely at the distal quarter of the wing;  $R_{2+3}$  almost straight. Epiproct narrowing posteriorly; posterior margin straight; lateral posterior angles rounded; apical half of epiproct carrying about 25 regularly spaced, long, fine setae. Paraproct simple, with a well-defined trichobothrial field carrying about 23 trichobothria; posteriorly setose, some of the marginal setae being long and fine. Subgenital plate (fig. 2) with a median apical lobe which is laterally and basally heavily sclerotized; the median less sclerotized part carries many pointed tubercles in the distal portion and rounded tubercles in the basal part giving a rugose appearance under the lower powers of the microscope; near the base of the lobe the tubercular areas are extended to include the lateral, more heavily sclerotized area; posterior margin of the apical lobe slightly incurved, resulting in a small projection at each end of the hind margin, each projection carrying several strong setae. Gonapophyses (fig. 3) with dorsal valve carrying four strong setae in addition to the usual small setae; external valve relatively large for the genus, and strongly setose.

**MATERIAL EXAMINED.** **South Africa:** 1 ♀, holotype, from twigs of Australian chestnut (*Castanospermum australe*) infested with *Icerya seychellarum*, Pietermaritzburg, Natal, 19.i.1959 (E. C. G. Bedford).

The holotype is dissected and mounted on a slide (Slide No. 1182-1) and will be retained for the present in the author's collection.

**DISCUSSION.** The present species is easily distinguished from others of the genus by the wing pattern and the form of the genitalia.

**Ectopsocus briggsi** MacLachlan. 110 ♂♂, 62 ♀♀, 19.i—18.ii.1959 (E. C. G. Bedford).

This species has been recorded from widely separated parts of the world. Most of the present specimens are at little smaller than indicated in the literature; the male genitalia conform well to the illustrations given by Badonnel (1943).

#### Family PSEUDOCAECILIIDAE

**Pseudocaecilius elutus** var. **africanus** Badonnel. 1 ♀, 26.1.1959 (E. C. G. Bedford).

This variety has been recorded from Mozambique, the Congo and Angola.

#### ACKNOWLEDGEMENT

I would like to thank Mr. Annecke for entrusting me with the study of this interesting collection.

**REFERENCES.**

- BADONNEL, A., 1931. Contribution à l'étude de la faune du Mozambique. Voyage de M. P. Lesne (1928-1929), 4e note, Copéognathes. *Ann. Sci. nat. Zool.* (10) **14**: 229-60, 35 figs.
- , 1943. Psocoptères. *Faune Fr.* **42**: 1-164, 375 figs. Paris.
- , 1955. Psocoptères de l'Angola. *Publ. cult. Cia. Diamant. Angola* **26**: 1-267, 625 figs.